

Bank Stabilization

Please fill in the gray areas below. Once you have estimated the load reductions, print a copy of this worksheet and attach it to the 319A or 319U Cost-Share Form.

IDEM Project Manager:
Project ARN:
Landowner Initials:
Date practice completed:

Example

	AH
03-771	02-992
	HJK
	8/8/2003

If estimating for just one bank, put "0" in areas for Bank #2.

Please select a soil textural class:

Sands, loamy sands	Silty clay loam, silty clay
Sandy loam	Clay loam
Fine sandy loam	Clay
Loams, sandy clay loams, sandy clay	Organic
Silt loam	

Please fill in the gray areas below:

Parameter	Bank #1	Bank #2
Length (ft)	10560	10560
Height (ft)	6	6
Lateral Recession Rate (ft/yr)*	0.2	0.2
Soil Weight (tons/ft ³)	0.0425	0.0425
Soil P Conc (lb/lb soil)**	0.0005	0.0005
Soil N Conc (lb/lb soil)**	0.001	0.001

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** If not using the default values, users must provide input for Total P and Total N soil concentrations

*Lateral Recession Rate (LRR) is the rate at which bank deterioration has taken place and is measured in feet per year. This rate may not be easily determined by direct measurement. Therefore best professional judgement may be required to estimate the LRR. Please refer to the narrative descriptions in Table 1.

Estimated Load Reductions

	BMP Efficiency* Bank #1	BMP Efficiency* Bank #2	Bank #1	Bank #2
Sediment Load Reduction (ton/year)	1.0	1.0	538.6	538.6
Phosphorus Load Reduction (lb/year)			538.6	538.6
Nitrogen Load Reduction (lb/yr)			1077.1	1077.1

* BMP efficiency values should be between 0 and 1, and 1 means 100% pollutant removal efficiency.

Table 1

LRR (ft/yr)	Category	Description
0.01 - 0.05	Slight	Some bare bank but active erosion not readily apparent. Some r
0.06 - 0.2	Moderate	Bank is predominantly bare with some rills and vegetative overha

0.3 - 0.5	Severe	Bank is bare with rills and severe vegetative overhang. Many exposed roots and some fallen trees and slumps or slips. Some changes in cultural features such as fence corners missing and realignment of roads or trails. Channel becomes more U-shaped as opposed to V-shaped.
0.5+	Very Severe	Bank is bare with gullies and severe vegetative overhang. Many exposed roots and culverts eroding out and changes in cultural features as above. Washouts common. Channel cross-section is U-shaped and stream may be meandering.

Source: Steffen, L.J. 1982. Channel Erosion (personal communication), as printed in "Pollutants Control: Calculation and Documentation for Section 319 Watersheds Training Manual," June 1999 Revision. Michigan Department of Environmental Quality - Surface Water Quality Division - Nonpoint Source Unit. EQP 5841 (6/99).

ills but no vegetative overhang.
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posed tree roots and l features such as el cross-section
fallen trees, drains ve. Massive slips or amcourse or gully

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